

Valid publication for 101 species and subspecies names of the genera *Nasa* and *Aosa* (Loasaceae: Cornales)

Publicación válida de 101 nombres de especies y subspecies de los generos *Nasa* y *Aosa* (Loasaceae: Cornales)

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Abstract

In the present paper, the valid names of 101 taxa of new species, new subspecies and new combinations of the genera *Nasa* and *Aosa* (Loasaceae: Cornales) are published. The invalid names of these taxa were originally published in various articles in the last ten years. This publication is carried out on the basis of the changes in the International Code of Botanical Nomenclature approved in the International Botanical Congress (IBC) in Vienna, 2005. For each taxon the valid names, protologue citation and type are provided, in the case of the 41 new species and subspecies a latin diagnosis is included, as per requirement of the Code. We additionally provide the citation for the original, invalid publication and corresponding illustration of the taxon. The taxon list here provided represents a complete list of all taxa currently known in the genus *Nasa*, including the species recently validated in TAXON.

Keywords: new species, new combinations, *Aosa*, *Nasa*, Loasaceae

Resumen

En el presente trabajo publicamos los nombres válidos de 101 taxones asignados como nuevas especies, nuevos subgeneros y nuevas combinaciones en los géneros *Nasa* y *Aosa* (Loasaceae: Cornales). Los nombres invalidos fueron publicados en diversos artículos en los últimos diez años. Se hace esta publicación como consecuencia de los cambios en el Código Internacional de Nomenclatura Botánica adoptados recientemente por el International Botanical Congress (IBC) realizado en Viena, 2005. Para cada taxón se provee el nombre válido, protólogo del tipo, diagnosis en latín para las 41 especies o subespecies nuevas, la cita de la publicación original inválida y la cita donde se encuentran los dibujos respectivos. El listado de taxones para *Nasa* incluye todas las especies actualmente conocidas del género, incluyendo a las especies recientemente publicadas en TAXON.

Palabras claves: especies nuevas, combinaciones nuevas, *Aosa*, *Nasa*, Loasaceae

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Introduction

A necessity to validate names in Loasaceae has arisen on the basis of a change of the International Code of Botanical Nomenclature adopted in Vienna in 2005, which render the genus and species names published in Weigend (1997) and all new species, subspecies and new combinations invalid. The names originally published in Weigend (1997) have now been validly published (Weigend 2006), but all the taxa based on the genera there described still require formally correct publication.

The present publication aims at providing valid publications for 100 names in *Nasa* (Dostert & Weigend, 1999; Rodríguez-R. & Weigend 1999, 2004; Weigend, 1998, 1999a, 2000a, 2000b, 2001a, 2001b, 2002, 2004; Weigend & Rodríguez-R., 2000, 2002, 2003; Weigend et al., 1998, 2003; i.e. all apart from those few included in Weigend, 2006) and also one name in *Aosa* (Weigend, 1999b). Full descriptions and - usually - illustrations have been published for all these taxa, so that the present paper only gives the bare essentials for valid publication, i.e., a valid name, Latin diagnoses and type citation. For purposes of convenience, the place of the original, invalid publication of the name is provided and the citation for a drawing, if available.

Formal Taxonomy

1. *Aosa sigmoidea* Weigend, spec. nov.

Type: Brazil. Minas Gerais: 15 km on road W of Januária on road to Serra das Araras, hill of raw, jagged limestone and tall forest at its base, elev. 575-650 m, coll. 20.4.1973, **W. R. Andersson 9240** (Holotype: M!; Isotype: NY!).

Suffrutex ad 2 m altus. Differt ab A. rostrata capsula sigmoidea basi epigynae davata (nec semiglobosa) et insupe ab omnibus speciebus generis Aosa indumento e pilis uncinatis et vix nevix pilis urentibus consistens.

Invalid publication: Weigend, 1999b.

Illustration: Weigend 1999b: Fig. 1.

2. *Nasa aequatoriana* (Urb. & Gilg) Weigend, comb. nov.

≡ *Loasa aequatoriana* (Urb. & Gilg) Weigend, Sendtnera 3: 228. 1996a. – Basionym: *Loasa triphylla* Juss. var. *aequatoriana* Urb. & Gilg, Nova Acta Acad. Caes. Leop.-Carol. Germ. Nat. Cur. 76: 240. 1900. – Type (lectotype designated in Weigend, 1996a: 228): [Ecuador, Pichincha:] Crescit in andium nemoribus, alt. 8000 pedes, **Jameson 427** (Lectotype: P!; Isotypes: BM!, E!).

Invalid publication: Weigend 1999a: 954.

Illustration: Weigend 2000b: Fig. 23 A-C.

3. *Nasa amaluzensis* (Weigend) Weigend, comb. nov.

– Basionym: *Loasa amaluzensis* Weigend, Bot. Jahrb. Syst. 118(2): 264. 1996d. – Type: Ecuador, Loja: 26,4 km S of Amaluza on road to Zumba, river valley, 2800 m, **Clematis 2392** (Holotype: QCA!; Isotype: QCNE!).

Invalid publication: Weigend 1999a: 954.

Illustration: Weigend, 2000b: Fig. 16 J-R.

4. *Nasa anderssonii* Weigend, spec. nov.

– Type: Ecuador, Zamora-Chinchipe: 4 km W of Punguitza on road to Punguitza Alto, 1100-1200 m, **Harling & Andersson 24146** (Holotype: GB; Isotype: QCA).

Plantae stricte erectae, 100-130 cm altae. Caulis basi ad 1 cm diametro, setis pallide badiis sparse et pilis scabridis brevissimis dense obtecta. Folia opposita, lamina late ovata, basi leviter cordata, apice acuminata, margine lobata lobis 3-4 in uno latere, late triangularibus margine minute et regulariter denticulatis. Calyx tubo conico, lobis lanceolatis, longe acuminatis, 13-14 mm longis et 4 mm latis; corolla leviter expansa; petala anguste oblonga, cymbiformia, 27-30 mm longa, 7 mm lata, apice acuminata, dente triangulari in utrisque lateribus 7 mm a basi remoto, sine setis sed dorso sparse pilis glochidiatis instructa, dense pilis uniseriatis, 3-cellulis, glanduligeris, aurantiacis obtecta.

Invalid publication: Weigend, 2000a: 17.

Illustration: Weigend, 2000b: Fig. 19 A-F.

5. *Nasa argemonoides* (Juss.) Weigend, comb. nov.

– Basionym: *Loasa argemonoides* Juss., Ann. Mus. Hist. Nat. 5: 26. 1804. – Type [designated in Weigend 2001a: 33]: [Colombia, Cundinamarca:] Bogotá [Serranía de Bogotá, road to Choachí], **Humboldt & Bonpland 375** (lecto: P-BONPL; iso Pl., fragment! & photo! F, Neg. nr. 38475).

Invalid publication: Weigend 2001a: 33

Illustration: Weigend, 2001a: Fig. 10, 11.

6. *Nasa aspiazui* (J.F. Macbr.) Weigend, comb. nov.

– Basionym: *Loasa aspiazui* J.F. Macbr., Field Mus. Nat. Hist. 13: 150. 1941. – Type: Peru, Depto Junín. Río Masamerich, **Weberbauer 6669** (Holotype: US!; Isotypes: FI, MOL!).

Invalid publication: Weigend, 1998: 163.

7. *Nasa asplundii* Weigend, spec. nov.

– Type: Ecuador, Napo: near Santa Barbara, climbing in thicket, 2700 m, 15.7.1955, **Asplund 16923** (S!, photo M).

Planta robusta, erecta, herbacea, basi subligiosa, 60-100 cm alta. Folia opposita, lamina suborbicularia (pentagona), basi anguste cordata, apice acuminata, margine subpalmatim lobata, lobis 2-3 in utrisque lateribus, regulariter triangularibus. Calycis lobi erecti, ovati-acuminati,

10 cm longi et 7-8 mm lati, setosi et dorso pilis numerosis brevibus scabridis obtecti (sine trichomatibus uniseriatis glanduligeris); corolla campanulata; petala in gemma imbricata, ovata, plana, apice obtusa, carnosae, aurantiacae, dorso dense pilis brevissimis (0,1-0,2 mm longis) scabridis obtecta. Squamae nectariferae rectangulares, 9 mm longae, 4 mm latae, basi gibbis globosis confluentibus ca. 3 mm diametro instructae, apice leviter incrassatae, tricenatae, margine in alas erectas, inflexas 2 mm longas et 1 mm latas protractae

Invalid publication: Weigend 2000b: 25

Illustration: Weigend, 2000b: Fig. 6 A-C, E-H.

8. *Nasa auca* (Weigend) Weigend, comb. nov.

– Basionym: *Loasa auca* Weigend, Bot. Jahrb. Syst. 118(2): 266. 1996d. – Type: Ecuador, Tunguragua: Baños, Trail east from Vizcaya, 2800 m, **Weigend & Horn 3803** (Holotype: M!; Isotypes: K!, M!, QCA!, QCNE!).

Invalid publication: Weigend 1999a: 954.

Illustration: Weigend, 2000b: Fig. 17 A-H.

9. *Nasa bicornuta* (Weigend) Weigend, comb. nov.

– Basionym: *Loasa bicornuta* Weigend, Sendtnera 3: 229. 1996a. – Type: Peru, Depto. Piura: Prov. Huancabamba, Palimbala (Canchaque - Huancabamba), **Sagástegui, Cabanillas & Dios 8137** (Holotype: AAU!; Isotypes: G!, MO!).

Invalid publication: Weigend 1999a: 954.

Illustration: Weigend 1996a: Fig. 19 A-F.

10. *Nasa callacallensis* Weigend & E. Rodr., spec. nov.

– Type: Peru, Depto Amazonas: Prov. Chachapoyas: Distrito Leymebamba, moist ravine on head of Eastern Calla Calla slopes, 3-4 km E of km 422 on Balsas-Leymebamba road, 3000-3200 m, 22.08.1962, **J. J. Wurdack 1753** (Holotype: USM!; Isotypes: UCA!, FI, NY!, US!).

Frutex, caulis principalis usque ad 200 cm altus, lignescens, pilis uniseriatis fuscibus dense obtectus. Folia basalia usque ad 30 cm diametro, suborbicularia, subpalmata. Inflorescentia terminalis, monochasialis vel dichasialis; corolla campanulata, petala aurantiaca, carnosae, subplana. Capsula suborbicularis, densissime setis urentibus et pilis uniseriatis obtectus.

Invalid publication: Weigend & Rodríguez, 2002: 10.

Illustration: Weigend & Rodríguez, 2002: Fig. 2.

11. *Nasa campaniflora* (Triana & Planchon ex Urban & Gilg.) Weigend, comb. nov.

– Basionym: *Loasa campaniflora* Triana & Planchon ex Urban & Gilg, Nova Acta Acad. Caes. Leop. Carol. German. Nat. Cur. 76: 218. 1900. – Type: Colombia. Quindío: Fusagasagá, Andes of Bogotá, 1800-2300m, **Triana 2476** (BM!). Triana s.n. (Pl., photo! & fragment! F, neg. nr. 38477; K!, G-DEL!). – Lectotype designated in Weigend 2001a: 38: **Triana 2476** (BM!).

Invalid publication: Weigend 2001a: 36.

Illustration: Weigend, 2001a: Fig. 12, 14.

12. *Nasa carnea* (Urb. & Gilg) Weigend, comb. nov.

– Basionym: *Loasa carnea* Urb. & Gilg, Bot. Jahrb. 45: 469. 1911. – Type: Peru, Depto. Cajamarca: Prov. Bambamarca: Chugur, 2700 m, **Weberbauer 4082** (Holotype: B+, photo 10182; isotype: G!). Lectotype, designated in Weigend 1998: 162.

Invalid publication: Weigend, 1998: 162.

13. *Nasa carunculata* (Urb. & Gilg) Weigend, comb. nov.

– Basionimo: *Loasa carunculata* Urb. & Gilg, Nova Acta Caes. Leop.-Carol. German. Nat. Cur. 76: 243. 1900. – Type: Peru: [Province unknown] **Lobb 358** (Holotype: K! photo F!, neg. nr. 495).

= *Loasa vestita* Killip, Journ. Wash. Acad. Science 19: 194. 1929. – Tipo: Peru, Depto Ayacucho: Prov. Huanta: N of Huanta, near Huallay, 3500-3600 m, **Weberbauer 7591** (Holotipo: US! isotipos: K!, F!, photograph. neg. nr. 50220, NY!, BM!, S!, MO!).

Invalid publication: Weigend, 1998: 162.

14. *Nasa chenopodiifolia* (Desr.) Weigend, comb. nov.

– Basionym: *Loasa chenopodiifolia* Desr., Lam. Encycl. 3: 580. 1791. – Type: [Depto. Lima?] „herbier de Perou”, **Jussieu s.n.** (Holotype: P-JUSS!, photograph F!, neg.nr. 38505).

= *Loasa aspera* Ruiz & Pav., Anales Inst. Bot. Cavanilles 16 (Flora peruviae, et chilensis 5: 407, tab. 441 b). Type (lectotype, designated in Weigend, 1998: 163): Tab. 441 b, l.c. (lectotipo); Depto Lima. Prov. Lima: «Loasa de Huayaquil», **Pavón 186** (epitype: G!, B+).

= *Loasa fulva* Urb. & Gilg, Nova Acta Caes. Leop.-Carol. German. Nat. Cur. 76: 224. 1900. – Tipo: Cult. en Berlin Bot. Garten anno 1846 (Holotype: B+, Photo F! neg. nr. 10191). – Neotype (designated in Weigend, 1998: 163): Depto. Lima: Santa Clara next to Lima-Oroya railway, 400-600 m, **Weberbauer 1672** (F!, G!).

= *Loasa inconspicua* Urb. & Gilg, Nova Acta Caes. Leop.-Carol. German. Nat. Cur. 76: 221. 1900. – Tipo: «Lima, northern Peru», **Cuming 1051** (Holotype: BM! isotype: E!).

= *Loasa leirolepis* Urb. & Gilg, Nova Acta Caes. Leop.-Carol. German. Nat. Cur. 76: 230. 1900. – Tipo: Cult. en Berlin Bot. Garten anno 1843 (Holotype: B+, Photo F!, neg. nr. 10200). – Neotype: (designated in -Weigend, 1998: 163): Depto. Lima: Santa Clara next to Lima-Oroya railway, 400-600 m, **Weberbauer 1672** (F!, G!).

= *Loasa xanthiifolia* Juss., Ann. Mus. Hist. Nat. 5: 26. 1804. – Type: Lima, **Dombey s.n.** (Holotype: P-Juss! fragment & photograph F, neg.nr. 38504; isotype: P!).

Invalid publication: Weigend, 1998: 163.

15. *Nasa colanii* Dostert & Weigend, spec. nov.

– Type: Peru, Depto Amazonas: Prov. Bagua, Cordillera Colán SE of La Peca, 3000 m, 25.9.1978, **Barbour 3573** (Holotype: MO!; Isotype: USM!).

Planta subscandens, caulis setibus hamosis et pilis glochidiatis obtectus. Folia irregulariter pinnata, margine profunde irregulariter serratis. Petala alba, expansa, apice leviter acuminata vel leviter emargina. Squamae nectariferae dorso bicornutae. Capsula non visa.

Invalid publication: Dostert & Weigend 1999: 461.

16. *Nasa connectans* Weigend, spec. nov.

– Type: Ecuador, El Oro: Near Chilla, a few kilometers south of Chilla north of the Laguna Chilla Cocha, steep slope with scree, 3400-3500 m, **A. Hofreiter & M. Hofreiter 14** (Holotype: MI, Isotype: QCNE!).

Frutex 100-150 m altus, folia in surculis juvenilibus tantum evoluta, demum decidua. Caules teretes, lignosi. Folia alterna; lamina ovati-lanceolata, basi truncata, margine leviter lobulata, lobis 6-7 in utrisque lateribus 10 mm longa et lata. Petala flavidi-alba, profunde cymbiformia, 12-17 mm longa, 5 mm profunda, basi unguiculata et dentes parvos triangulares ca. 5 mm a basi remotos provisa, dense setosa et dorso pilis glochidiatis instructa. Squamae nectariferae ovatae, apicem versus angustatae, flavae, 4 mm longae, 3 mm latae, basi incurvatae, dorso basin versus gibbis duabus nectariferis ellipticis confluentibus ca. 2 mm diametro et supra eas callis tribus rubris confluentis in linea transversali dispositis instructae, apice conspicue incrassatae, leviter recurvae, sine filis, margine in alas duas erectas parvas 1mm longas et 0,5 mm latas protractae.

Invalid publication: Weigend, 2000b: 63

Illustration: Weigend et al., 2003: Fig. 8 A-E.

17. *Nasa contumazensis* Weigend & E.Rodr., spec. nov.

– Type: Peru, Depto. Cajamarca, Prov. Contumazá, near Yetón, Contumazá, 2200 m, 1.05.1981, **A. Sagástegui A., E. Alvítez & J. Mostacero 9755** (holotype: HUT!; isotypes: MI, MO!, NY!).

Planta rigide erecta, ad 150 cm alta. Folia late ovata, petiolis 30-100 mm longis instructa, estipulata, laete viridis, 200-240 mm longa et lata. Petala alba, 20-25 mm longa, 8 mm profunda, profunde cymbiformia. Squamae nectariferae 5 mm longae, 3 mm latae. Capsula clavata, 20-25 mm longa, 8-10 mm lata, stricte erecta et pedicelo patenti instructa.

Invalid publication: Weigend & Rodríguez, 2003: 373.

Illustration: Weigend & Rodríguez, 2003: Fig. 16 A-G.

18. *Nasa cuatrecasasii* Weigend, Taxon 55(2): 465. 2006.

– Type: Colombia, Magdalena: Sierra Nevada de Santa Marta, south-eastern side, río Donachuy, Sacaracangua to Canguruaca, 1975 m, **Van der Hammen 1100** (Holotype: COL!).

Invalid publication: Weigend 1997: 218.

Illustration: Weigend, 2001a: Fig. 13.

19. *Nasa cymbopetala* (Urb. & Gilg) Weigend, comb. nov.

– Basionym: *Loasa cymbopetala* Urb. & Gilg, Bot. Jahrb. 45: 467. 1911. – Type: Peru, Depto Ancash: Prov. Cajatambo: Above Ocos, 3300-3500 m, **Weberbauer 2758** (Holotype: B+, Photo F!, neg. nr. 10185).

Invalid publication: Weigend, 1998: 163.

20. *Nasa dillonii* Weigend, spec. nov.

–Type. Peru, Depto Cajamarca: Prov. Santa Cruz, Distrito Catache, Upper Río Zaña valley, 5 km above Monte Seco on path to Chorro Blanco, near the waterfall, 1500–2000 m, **Dillon, Sagástegui, Dillon, Alcorn, Santistebán, Leiva, Téllez & Guzmán 4416** (Holotype: F; Isotypes: HUT, MO, US).

Plantae erectae, 70–100 cm altae. Caulis basi 2,5–4 mm diametro, setis rufis et pilis scabridis brevissimis obtectus. Folia opposita, lamina late ovata, basi cordata, apice acuminata, margine lobata, lobis 2–3 in uno latere, ovatis margine serrati-denticulatis, petiolus basi in utrisque lateribus caulis macula obscure viride ornatus. Calyx tubo turbinato, lobis anguste ovatis, longe acuminatis, 10–12 mm longis et 3 mm latis; corolla expansa; petala rubra, anguste oblonga, cymbiformia, 20–24 mm longa, 3–4 mm lata, apice acuminata, dorso sparse setis pallidis et dense pilis scabridis instructa.

Invalid publication: Weigend, 2000a: 18.

Illustration: Weigend, 2000a: Fig. 2 A–F.

21. *Nasa dolichostemon* (Urb. & Gilg) Weigend, comb. nov.

–Basionym: *Loasa dolichostemon* Urban & Gilg, Nova Acta Acad. Caes. Leop.-Carol. German. Nat. Cur. 76: 215.1900. –Type. Colombia, Cauca: Western Slopes of Volcán Sotará, alt. 2500–3000 m, **Lehmann 6193** (K!); Popayán, eastern side of Páramo Guanacas, alt. 2600–3000 m, **Lehmann 5761** (B+, photo F!, neg.nr. 10186; K!, MO!, US!); Páramo de Moras, alt. 3000 m, **Lehmann 3764** (BM!, G!), **Lehmann 900** (G!). –Lectotype [designated in Weigend 2001a:42]: **Lehmann 5761** (lecto: K!; iso: B+ – photo F, neg.-nr. 10186, F!, MO!, US!).

Invalid publication: Weigend 2001a: 42.

Illustration: Weigend, 2001a: Fig. 15.

22. *Nasa driesslei* Weigend, spec. nov.

–Type. Peru, Depto. Amazonas, Prov. Chachapoyas, road from Balsas to Leimebamba, 50 km from Balsas, 3100 m, **Weigend, Dostert & Drieble 97/400** (Holotype: M; Isotypes: F, M, USM).

Plantae erectae, 80 cm altae. Caulis basi ad 3–4 mm diametro, setis flavescentis et pilis scabridis brevissimis obtectus. Folia opposita, lamina ovata, basi leviter cordata, apice acuminata, secundum nervum medianum albi-lineata, margine lobata, lobis 3–6 in uno latere, triangulari-ovatis margine serratis. Calyx tubo turbinato, lobis ovati-acuminatis, 10 mm longis et 3 mm latis; corolla leviter expansa; petala flava, oblonga, cymbiformia, 20–25 mm longa, 6 mm lata, apice acuminata, dente triangulari in utrisque lateribus 7 mm a basi remoto provisa, dorso sparse setis pallidis et dense pilis scabridis instructa.

Invalid publication: Weigend, 2000a: 20.

Illustration: Weigend, 2000a: Fig. 3 A–F.

23. *Nasa dyeri* (Urb. & Gilg) Weigend subsp. *australis* Dostert & Weigend, subsp. nov.

–Type. Peru, Depto Amazonas: Prov. Bagua, trail from La Peca to El Arenal, 1200 m, **Dostert 98/80C** (Holotype: M!; Isotypes: CPUN!, F!, HAO!, K!, M!, MO!, NY!, USM!, W!).

Planta erecta ramis patulis ad 60 cm alta. Folia regulariter pinnata, margine profunde biserrata vel lobulata. Petala alba, leviter cymbiformia, expansa, apice filis duobus usque ad 5 mm longis protracta. Squamae nectariferae dorso bicornutae, tricolores. Capsula deflexa vel semi-erecta, turbinata, 12–15 longa, apice ad 10 mm lata, stipite 15 mm longo suffulta.

Invalid publication: Dostert & Weigend 1999: 467.

Illustration: Dostert & Weigend 1999: Fig. 9 A–E.

24. *Nasa dyeri* (Urb. & Gilg) Weigend, comb. nov.

–Basionym: *Loasa dyeri* Urb. & Gilg, Nova Acta Acad. Caes. Leop.-Carol. Germ. Nat. Cur. 76: 242. 1900. Type: (lectotype designated in Weigend 1996a: 326.): Ecuador, [Bolívar:] San Antonio, in monti Chimborazo, **Spruce 6183** (Lectotype: BM!; Isotypes: CBGE!, W! – Photo F!).

Nasa dyeri (Urb. & Gilg) Weigend subsp. *dyeri*.

Invalid publication: Weigend 1999a: 954.

Illustration: Weigend 1996a: Fig. 22 A–F.

25. *Nasa ferox* Weigend, spec. nov.

–Type. Ecuador, Azuay: Cuenca Department, Contrayerba, 3600–3800 m, **Lehmann 7943** (Holotype: US!; Isotypes: K!, F!).

Planta robusta, herbacea, basi sublignescentes, 50–80 cm altae. Foliarum lamina suborbicularia, in foliis mediis peltata, petiolo 1/4–1/5 diametri a margine adaxiali inserto, in foliis superioribus basi profunde cordata, margine subpalmatim lobata, lobis 1/5–1/4 diametro laminae attingentibus. Corolla late campanulata ad crateriformis; petala in gemma imbricata, late ovata ad subcircularia, aurantiaca, dorso pilis scabridis numerosis et in nervo mediano setis rubris oblecta. Squamae nectariferae rectangulares, 12 mm longae, 3 mm latae, basi gibbis duabus globosis 3 mm diametro instructae, apice leviter incrassato et tricrenato, margine in alas duas verticales, inflexas 5 mm longas et 2 mm latas protractae.

Invalid publication: Weigend 2000: 38.

Illustration: Weigend 1996d: Fig. 8.

26. *Nasa ferruginea* (Urb. & Gilg) Weigend, comb. nov.

–Basionym: *Loasa ferruginea* Urb. & Gilg, Nova Acta Acad. Caes. Leop.-Carol. Germ. Nat. Cur. 76: 225. 1900. Type: (lectotype, designated in Weigend, Arnaldoa 5(2): 164. 1998): Peru, Depto Puno: Prov. Agapata, Agapata, **Lechler 1877** (GOET!; K, isolectotype: B+, photo F!, neg. nr. 10187).

Invalid publication: Weigend, 1998: 164.

27. *Nasa formosissima* Weigend, spec. nov.

–Type. Peru, Depto. Cajamarca: Prov. Celendin, 18–20 km E of Celendin on road to Balsas, 4–8 km after pass height Abra Gelig, 2800–2900 m, March 1997, **M. Weigend, N. Dostert &**

K. Drieble 97/377 (Holotype: HUT!; Isotypes: FI, KI, MI, USMI, NYI, USI!).

Planta rigide erecta, ad 150 cm alta. Folia rhomboidea vel ovata, petiolis 15-30 mm longis instructa, superiora pseudostipulata, lamina supra obscure viridis, 45-90 mm longa, 30-50 mm lata. Petala alba, 20-30 mm longa, 8 mm profunda, profunde cymbiformia. Squamae nectariferae 8 mm longae, 7 mm latae. Capsula clavata, 35-40 mm longa, 8-10 mm lata, stricte erecta et pedicelo stricte erecto instructa.

Invalid publication: Weigend & Rodriguez, 2003: 368.

Illustration: Weigend & Rodriguez, 2003: Fig. 14 A-G.

28. *Nasa glabra* (Weigend) Weigend, comb. nov.

- Basionym: *Loasa glabra* Weigend, Bot. Jahrb. Syst. 118(2): 268. 1996d. Type: Ecuador, Zamora-Chinipe: Parque Nacional Podocarpus, road Yangana - Valladolid, km 26, 2550 m, **Madsen et al. 75762** (Holotype: QCA!; Isotypes: AAU!, LOJA!).

Invalid publication: Weigend 1999a: 955.

Illustration: Weigend, 2000b: Fig. 16 A-I.

29. *Nasa glandulosissima* Weigend, spec. nov.

- Type: Peru, Depto. Piura: Prov. Huancabamba, road Huancabamba to Chulucanas, below pass height on Canchaque side at 1500—1800 m, 21.05.1998, **M. Weigend & N. Dostert 98/282** (Holotype: MI!; Isotypes: CPUN!, FI, USMI!).

N. glandulosissima differt ab ceteris speciebus generis *Nasa* combinatione characterum: indumentum dense glanduliferum, folia peltata, flores aurantiaci, squamis flavis.

Invalid publication: Weigend in Weigend, M., E. Rodríguez R. & N. Dostert, 1998: 152.

Illustration: Weigend, M., E. Rodríguez R. & N. Dostert, 1998: Fig. 1 A-I.

30. *Nasa grandiflora* (Desr.) Weigend, comb. nov.

- Basionym: *Loasa grandiflora* Desr., in Lamarck Encyc. bot. 3: 580. 1791. Type: «**Joseph de Jussieu** [s.n.], Perou» (Holotype: P-JUSS!; Photo M, QCA).

= *Loasa acuminata* Wedd. Chlor. andina 1: 220.1855. Type (designated in Weigend 1996c: 40) [Ecuador, Pichincha:] Western slopes of Pichincha, **Jameson 135** (Holotype: P!; Isotypes: BM!, EI!, GI!, B+).

= *Loasa aurantiaca* Urb. & Gilg, Nova Acta Acad. Caes. Leop.-Carol. Germ. Nat. Cur. 76: 209.1900. Type (lectotype, designated in Weigend 1996c: 240): [Ecuador, Carchi:] Cordillera de Tulcán, 2800-3000 m, **Lehmann 533** (Lectotype: G!; Isolectotypes: BM!, US!).

Invalid publication: Weigend 1999a: 955.

Illustration: Weigend, 2000b: Fig. 5.

31. *Nasa hastata* (Killip) Weigend, comb. nov.

- Basionym: *Loasa hastata* Killip, Field Mus. Nat. Hist. 18:

154.1928. Type: Peru, Depto. Lima. Prov. Lima: Matucana, 2500 m, **Macbride & Featherstone 416** (Holotype: US!; Isotype: FI!).

Invalid publication: Weigend, 1998: 164.

Illustration: Weigend & Rodriguez, 2003: Fig. 18 A-F.

32. *Nasa herzogii* (Urb. & Gilg) Weigend, comb. nov.

- Basionym: *Loasa herzogii* Urb. & Gilg, Meded. Rijk. Herb. Leiden 29: 57.1916. Type: Bolivia, [Depto Santa Cruz?] Forest next to Río Tocarani, 2600 m, **Herzog 2277** (L!, Z!, S!, B+ photo FI, neg. nr. 10195).

Invalid publication: Weigend, 2001b: 153.

33. *Nasa hornii* Weigend, comb. nov.

- Basionym: *Loasa hornii* Weigend, Bot. Jahrb. Syst. 118/2: 254.1996d.- Type: Ecuador, Bolívar: just NE of Chillanes, 2500 m, **Weigend & Horn 3815** (Holotype: MI!; Isotypes: QCA!, QCNE!).

Invalid publication: Weigend 1999a: 955.

Illustration: Weigend, 2000b: Fig. 10 A-H.

34. *Nasa humboldtiana* (Urb. & Gilg) Weigend, comb. nov.

- Basionym: *Loasa humboldtiana* Urban & Gilg, Nova Acta Acad. Caes. Leop.-Carol. German. Nat. Cur. 76: 240. 1900. Type: (lectotype designated in Weigend 1996a: 232): [Ecuador, Tungurahua:] Llalla, Tungurahua, **Spruce 6002** (Lectotype: P!; Isotypes: B lost, photo FI, BM!, EI!, MI!, OXF!, GOET!, WI!).

Invalid publication: Weigend 1999a: 955.
Nasa humboldtiana (Urb. & Gilg) Weigend

35. *Nasa humboldtiana* (Urb. & Gilg) Weigend subsp. *obliqua* Dostert & Weigend, subsp. nov.

- Type: Peru, Cajamarca: Prov. Hualgayoc [Prov. Santa Cruz], Monte Seco, 1800 m, **Soukup 3826** (Holotype: US!).

Planta erecta ramis stricte erectis, ad 150 cm alta. Folia regulariter trifoliata, basi cuneata, apice acuminata, margine regulariter serrata, foliola lateralia basi obliqua. Petala alba, expansa, apice leviter acuminata, integra. Squamae nectariferae dorso cymbiformes nec bigibbosae vel bicornutae, callis duobus ornatae, roseo-albae. Capsula turbinata, stipite 40-50 mm longo suffulta.

Invalid publication: Dostert & Weigend 1999: 464.

Illustration: Dostert & Weigend 1999: Fig. 8 H.

36. *Nasa humboldtiana* (Urb. & Gilg) Weigend subsp. *roseoalba* (Weigend) Dostert, stat. & comb. nov.

- Basionym: *Loasa roseoalba* Weigend, Sendtnera 3: 230.1996a.
- Type: Ecuador, Bolívar: NE of Chillanes, September—October 1995, **Weigend & Horn 3812** (Holotype: MSB!; Isotypes: GI!, QCA!, QCNE!).

Invalid publication: Dostert & Weigend 1999: 464.

Illustration: Weigend 1996a: Fig. 5 A-I.

37. *Nasa humboldtiana* (Urb. & Gilg) Weigend
subsp. *tricolor* Dostert & Weigend, subsp. nov.

– Type: Peru, Piura: Prov. Huancabamba, 11 km from Canchaque on road to Huancabamba, 1700 m, **Weigend & Dostert 98/186** (Holotype: M!; Isotypes: B!, CPUN!, FI, HAO!, KI, MO!, NY!, P!, SI, US!, USM!, W!).

Planta erecta ramis stricte erectis, ad 150 cm alta. Folia regulariter trifoliata, basi cuneata, apice acuminata, margine regulariter serrata, foliola lateralia basi leviter obliqua. Petala alba, expansa, apice leviter acuminata, integra. Squamae nectariferae dorso bicornutae, callis duobus ornatae, tricolores. Capsula turbinata, stipite 40–50 mm longo suffulta.

Invalid publication: Dostert & Weigend 1999: 464.

Illustration: Dostert & Weigend 1999: Fig. 8 A-D.

38. *Nasa insignis* Weigend & E. Rodr., spec. nov.

– Type: Peru, Depto. Cajamarca, Prov. Santa Cruz, Distr. Catache, Bosque Monteseco, (El Corro Blanco), 1880 m, 20.01.1996, **S. Leiva G., E. Rodríguez R. & E. López M. 1743** (Holotype: M!, Isotypes: F, HAO, HUT).

N. insignis differt ab ceteris speciebus generis Nasa floribus campanulatis cum petalis albis et squamis roseis.

Invalid publication: Weigend in Weigend, M., E. Rodríguez R. & N. Dostert, 1998: 154. 1998.

Illustration: Weigend, M., E. Rodríguez R. & N. Dostert, 1998: Fig. 2 A-K.

39. *Nasa jungiifolia* (Weigend) Weigend, comb. nov.

– Basionym: *Loasa jungiifolia* Weigend, Bot. Jahrb. Syst. 118/2: 258. 1996d. – Type: Ecuador, Azuay: Tinajilla Pass S of Cumbe on Panamerican Highway Cuenca-Loja, 2600-3000 m, **Weigend & Horn 3838** (Holotype: M!; Isotypes: KI, MI, QCAI, QCNE!).

Invalid publication: Weigend 1999a: 955.

Illustration: Weigend, 2000b: Fig. 11 A-H.

40. *Nasa karsteniana* (Urb. & Gilg) Weigend, comb. nov.

– Basionym: *Loasa karsteniana* Urban & Gilg, Nova Acta Acad. Caes. Leop.-Carol. German. Nat. Cur. 76: 244. 1900. – Type: Colombia, Magdalena: St. Miguel, Sierra Nevada de Santa Marta, **Karsten s.n.** (W!, photo FI, neg. nr. 32575).

Invalid publication: Weigend 2001a: 47.

41. *Nasa lehmanniana* (Urb. & Gilg) Weigend,
comb. nov.

– Basionym: *Loasa lehmanniana* Urban & Gilg, Nova Acta Acad. Caes. Leop.-Carol. German. Nat. Cur. 76: 213. 1900. Type: Colombia, Caldas: Near Río Chinchina & Río de los Termales, 2200-2500m, **Lehmann 3078** (B+, photo FI, neg. nr. 10149, BM!, G!), dito, Kalbreyer 1540 (K!). – Lectotype [designated in

Weigend 2001a: 52]: **Lehmann 3078** (Lectotype: G!; Isotype: BM, 3078, B+, photo FI, neg.nr. 10149).

= *Loasa grandifolia* Urban & Gilg, Nova Acta Acad. Caes. Leop.-Carol. German. Nat. Cur. 76: 208. 1900. Type: Colombia, without precise locality, **Purdie 10149** (B+, KI).

Invalid publication: Weigend 2001a: 48.

Illustration: Weigend, 2001a: Fig. 17 A-H.

42. *Nasa kuelapensis* Weigend, spec. nov.

– Type: Peru, Depto. Amazonas, Prov. Chachapoyas, Fortress of Kuelap, S 06° 25' 14", W 077° 47' 57", 16.05.2001, 3000 m, **T. Henning & C. Schneider 244** (Holotype: USM!; Isotype: BSB!).

Planta rigide erecta, ad 70 cm alta. Folia rhomboidea, petiolis 10-15 mm longis instructa, superiora pseudostipulata, lamina supra obscure viridis, 35-40 mm longa, 25-30 mm lata. Petala alba, basin et apicem versus angustata, profunde cymbiformia. Squamae nectariferae 4 mm longae, 3 mm latae. Capsula clavata, 30-35 mm longa, 6 mm lata, stricte erecta et pedicelo stricte erecto instructa.

Invalid publication: Weigend & Rodríguez, 2003: 366.

Illustration: Weigend & Rodríguez, 2003: Fig. 13 A-I.

43. *Nasa lambayequensis* Weigend, spec. nov.

– Type: Peru, Depto. Lambayeque: Province Ferreñafe, Incahuasi, to Laguna Tembladera, 3000 m, 13 Sep. 1985, **A. Sagástegui A., D. Skillman, J. Mostacero & L. Ramírez 12872** (Holotype: HUT!; Isotypes: F, MO).

Haec species N. pongalamesae affinis, sed ab ea foliis late ovatis ambobus lateribus lobis 2 vel 3 instructis (nec anguste ovatis ambobus lateribus lobis 5-7 instructis), corolla aurantiaca (nec rosea) atque caule apicem versus dense (nec parce) glanduloso differt.

Invalid publication: Weigend, 2004c: 138.

Illustration: Weigend, 2004c: Fig. 3 A-F.

44. *Nasa laxa* (J.F. Macbr.) Weigend, comb. nov.

– Basionym: *Loasa laxa* J. F. Macbr., Field Mus. Nat. Hist. 13: 156. 1941. – Type: Peru, Depto Cajamarca, Prov. Contumazá, Contumazá, **Weberbauer 6993** (holotype: FI, isotype: MOL!).

Invalid publication: Weigend, 1998: 164.

45. *Nasa lenta* (J.F. Macbr.) Weigend, comb. nov.

– Basionym: *Loasa lenta* J.F. Macbr., Publ. Field Mus. Nat. Hist., Bot. Ser. 13(4/1): 157. 1941. – Type: Peru, Depto. Huánuco. [Prov. Ambo?]: On Río Huallaga, Muña, 3100 m, **Weberbauer 6722** (Holotype: FI; Isotype: MOL!).

Invalid publication: Weigend, 1998: 164.

Illustration: Weigend, 2000a: Fig. 4 A-D.

46. *Nasa limata* (J.F. Macbr.) Weigend, comb. nov.

– Basionym: *Loasa limata* J.F. Macbr., Publ. Field Mus. Nat. Hist. 13: 157. 1941. – Type: Peru, Depto Apurímac. Prov.

Abancay: Ampay, 3200 m, **H. E. Stork et al. 10624** (F!; US!, K!, G!, UC! iso).

Invalid publication: Weigend, 1998: 163.

47. *Nasa lindeniana* (Urb. & Gilg) Weigend, comb. nov.

– Basionym: *Loasa lindeniana* Urb. & Gilg, Nova Acta Acad. Caes. Leop.-Carol. Germ. Nat. Cur. 76: 194.1900. – Type (lectotype, designated in Weigend, 2001b: 153.): Venezuela. Mérida: Sierra Nevada near Mérida, 3000 m, anno 1842, **J. Linden 405** (lectotype, BM!; isoelectotypes, CGE!, K!, OXF!, Pl!, W!). Same locality, **N. Funck & L. J. Schlim 1045** (syntypes, BM!, G!, Pl!, W!, Fragment F!).

Invalid publication: Weigend, 2001b: 153.

48. *Nasa longivalvis* E. Rodr. & Weigend, spec. nov.

– Type: Perú. Depto. La Libertad, Prov. Bolívar, Distrito Bambamarca. Entre Trigobamba y Bambamarca. 2800 – 3500 m. 07 junio 2003. **E. Rodríguez R. & V. Medina I. 2557** (Holotype: HUT; Isotypes: BSB, F, HAQ, MO, USM)

Affinis Nasa stolonifera Weigend sed differt caulis cum pilis numerosis brevibus scabridis et glochidiatis (nec setis), petalis pericymbiformibus, basi angustatissimus, ruber-roseis (nec aurantiacus) et valvis apicalis circa longis capsularis.

Invalid publication: Rodríguez & Weigend 2004: 69.

Illustration: Rodríguez & Weigend, 2004: Fig. 2 A-F, 3 A-J.

49. *Nasa loxensis* (Kunth) Weigend, comb. nov.

– Basionym: *Loasa loxensis* Kunth in Humb., Bonpl. & Kunth, Nov. gen. sp. 6: 116.1823. – Type: [Ecuador, Loja:] «Loxa peruvianorum», **Humbolt & Bonpland 3349** (P-BONPL! holotype, Photo F!, neg. nr. 38499).

= *Loasa calycina* Benth., Pl. Hartw.: 132. 1839. – Type: [Ecuador, Loja:] «Loxa», **Hartweg s.n.** (K!, holotype).

Invalid publication: Weigend 1999a: 955.

Illustration: Weigend, 2000b: Fig. 15 A-M.

50. *Nasa macrantha* (Urb. & Gilg) Weigend, comb. nov.

– Basionym: *Loasa macrantha* Urb. & Gilg, Bot. Jahrb. 45: 468. 1911. – Type: Peru, Depto. Junín, Prov. Tarma, Palca, 3400 m, **Weberbauer 2494** (holo: B+, photo F!, neg. nr. 10203).

Invalid publication: Weigend, 1998: 164.

51. *Nasa macrorrhiza* (Urb. & Gilg) Weigend, comb. nov.

– Basionym: *Loasa macrorrhiza* Urb. & Gilg, Bot. Jahrb. 45: 468. 1911. – Type: Peru, Depto. Ancash, Prov. Huaylas, Cordillera Negra above Caraz, 4200 m, **Weberbauer 3080** (Holotype: B+, photo F!, neg. nr. 10206; iso: G!, MOL!).

Invalid publication: Weigend, 1998: 164.

52. *Nasa macrothyrsa* (Urb. & Gilg) Weigend, comb. nov.

– Basionym: *Loasa macrothyrsa* Urb. & Gilg, Bot. Jahrb. 45: 469. 1911. – Type: Peru, Depto. Cajamarca. Prov. San Miguel: San Miguel, 2400 m, **Weberbauer 3907** (holotype: B†, photo F!, neg. nr. 10205).

Invalid publication: Weigend, 1998: 165.

Illustration: Weigend et al., 2003: Fig. 9 A-L.

53. *Nasa magnifica* (Urb. & Gilg) Weigend, comb. nov.

– Basionym: *Loasa magnifica* Urb. & Gilg, Nova Acta Acad. Caes. Leop.-Carol. Germ. Nat. Cur. 76: 204. 1900. – Type: Peru, [Depto Lima?] Without locality, **MacLean s.n.** (K!; B+, photo F!, neg. nr. 10207, iso).

= *Loasa macrophylla* Urb. & Gilg, Bot. Jahrb. 45: 467.1911. – Type: Peru, Depto Ancash. Prov. Chiquián: Above Ocros, 2900 m, **Weberbauer 2718** (B+, photo F!, neg. nr. 10204).

Invalid publication: Weigend, 1998: 163.

54. *Nasa modesta* Weigend, spec. nov.

– Type: Ecuador, Chimborazo: Rd. Alausí - Baquel - Guamate, 2800-3200 m, **Freire Fierro et al. 672** (Holotype: QCA!).

Fruticulus 60-100 cm altus. Caules ad 1 cm diametro. Planta pilis urentibus albis ad pallide rubris ad 5 mm longis et pilis glochidiatis ad 1 mm longis et insuper pilis numerosis uniseriatis glanduligeris ad 1 mm longis obtecta. Folia opposita, lamina pentagona, peltata, petiolo a margine 0,5-1,5 cm remote inserto, margine leviter subpalmate lobata, lobis 2-3 in utrisque lateribus, late triangularibus, in pagina adaxiali setis 3 mm longis et pilis glochidiatis 0,75 mm longis obtecta, in pagine abaxiali setis ca 5 mm longis et pilis glochidiatis ca. 0,3 mm longis obtecta. Calycis tubus conicus, lobis erectis lanceolatis 25 mm longis basi 9 mm latis, setosis et extus insuper pilis scabridis obtectis (sine trichomatibus uniseriatis glandulosus); corolla crateriformis; petala in gemma imbricata, subcircularia, 30 mm longa et 28 mm lata, apice rotundata, membranacea, aurantiaca. Squamae nectariferae rectangulares, 10 mm longae, 4 mm latae, dorso basin versus gibbis globosis 2-3 mm instructae, apice leviter incrassatae, tricenatae, margine in alas erectas, inflexas, 5,5 mm longas et 2 mm latas protractae.

Invalid publication: Weigend 2000b: 40.

Illustration: Weigend, 2000b: Fig. 12 A-F.

55. *Nasa moroensis* Weigend, spec. nov.

– Type: Peru, Depto. Ancash, Prov. Moro, road from Moro to Pamparomas, S 09° 5' 53'', W 078° 05' 47'', 1180-1600 m, 2.05.2000, **M. Weigend & E. Salas 2000/601** (Holotype: USM!; Isotypes: M!, NY!, HUT!, F!).

Planta rigide erecta, ad 150 cm alta. Folia pentagona, subpalmatim lobata, petiolis 50-80 mm longis instructa, estipulata, supra obscure viridis, 100-150 mm longa et lata. Petala alba, 15-20 mm longa, 5-6 mm profunda, profunde cymbiformia. Squamae nectariferae 4-5 mm longae, 4 mm latae. Capsula clavata, 15-20 mm longa, 8-10 mm lata, stricte erecta et pedicelo patenti instructa.

Invalid publication: Weigend & Rodríguez, 2003: 370.

Illustration: Weigend & Rodríguez, 2003: Fig. 15 A-G.

56. *Nasa nubicolorum* Weigend, spec. nov.

– Type: Peru, Depto. Chachapoyas, Prov. Chachapoyas, Distr. Leymebamba, near Laguna de los Condores, southern part, 2500-2700 m, **Quipuscoa, Sagástegui, Leiva & Bejarano 1238** (Holotype: M; Isotype: HAO, HUT).

Plantae erectae vel ascendentes, usque ad 120 cm altae. Caulis basi ad 4-6 mm diametro, setis obscure rufis et pilis scabridis brevissimis obtectus. Folia opposita, lamina late ovata, basi leviter cordata, apice acuminata, margine lobata, lobis 3-5 in uno latere, triangularibus margine serratis. Calyx tubo turbinato, lobis ovatis, acuminatis, 10-12 mm longis et 5 mm latis; corolla expansa; petala aurantiaca, ovata vel ovati-oblonga, leviter cymbiformia, 16-20 mm longa, 8 mm lata, apice rotundata, dorso sparse setis pallidis et dense pilis scabridis instructa.

Invalid publication: Weigend, 2000a: 22.

Illustration: Weigend, 2000a: Fig. 5 A-F.

57. *Nasa olmosiana* (Gilg ex J.F. Macbr.) Weigend, comb. nov.

– Basionym: *Loasa olmosiana* Gilg ex J.F. Macbr., Publ. Field Mus. Nat. Hist., Bot. Ser. 13: 161. 1941. – Type: Peru, Depto. Lambayeque, Olmos, **Weberbauer 7097** (Holotype: F).

Invalid publication: Weigend 1998: 165.

Illustration: Weigend 1996d: Fig. 7 A-F.

58. *Nasa orbicularis* Weigend, Taxon 55(2): 465. 2006.

– Type: Colombia, Valle del Cauca: Páramo at head of Quebrada de Sta Barbara, near Abelina, alt. 3300 m, **Core 1638** (US!).

Invalid publication: Weigend 1997: 218.

Illustration: Weigend, 2001a: Fig. 18.

59. *Nasa otuzcensis* Weigend & E. Rodr., spec. nov.

– Type: Peru, Depto. La Libertad, Prov. Otuzco, Distr. La Cuesta, path from La Cuesta to Nambuque, 2430-2500 m, 20.5.2000, **E. Rodríguez R. & A. Angeludis C. 2374** (Holotype: HUT!; Isotypes: FI, HAO!, MI, MO!, NY!, USM!).

Planta rigide erecta, ad 200 cm alta. Folia late ovata, petiolis 30-100 mm longis instructa, superiora pseudostipulata, lamina laete viridis, 200-300 mm longa et lata. Petala alba, 20-25 mm longa, 8 mm profunda, profunde cymbiformia. Squamae nectariferae 5 mm longae, 3 mm latae. Capsula clavata, 20-25 mm longa, 8-10 mm lata, stricte erecta et pedicelo patenti instructa.

Invalid publication: Weigend & Rodríguez, 2003: 375.

Illustration: Weigend & Rodríguez, 2003: Fig. 17 A-F.

60. *Nasa panamensis* Weigend, spec. nov.

– Type: Panamá, Province of Chiriquí, along road between Gualaca and Fortuna dam site, N of Gualaca on Río Chiriquí,

12.5 miles from bridge over Río Esti, 1.7 miles from junction of road to the tunnel, 2.5 miles beyond Los Planes, 1200 m, 28.11.1979, **T.B. Croat 48815** (MO!).

Nasa panamensis N. *lehmanniana* (Urb. & Gilg) Weigend similis sed differt bracteis amplexicaulibus vel stipulaceiformibus, squamis nectariferis brevioris, dorso rotundatae nec bigibbosae, apice 3 appendicibus linearis bene evolutae instructae, et capsulae esetulosae.

Invalid publication: Weigend, 2002: 213.

Illustration: Weigend, 2002: Fig. 2 A-B, 3 A-F.

61. *Nasa pascoensis* Weigend, spec. nov.

– Type: Peru, Dept. Pasco, Prov. Oxapampa, Cordillera Yanachaga, road over should Cerro Pajonal to Villa Rica drainage, ca. 12 km SE of Oxapampa, 2300-2500 m, Foster & Smith 9073 (holotype: MI; isotypes: FI, MO!, USM!).

Plantae erectae, usque ad 60 cm altae. Caulis basi ad 3-5 mm diametro, densissime setis flavescentibus et pilis scabridis brevissimis obtectus. Folia opposita, lamina late ovata, basi rotundata, apice acuminata, margine profunde serrata vel lobulata. Calyx tubo turbinato, lobis ovatis, acuminatis, 8-9 mm longis et 3-4 mm latis; corolla leviter expansa; petala rubra, anguste oblonga, cymbiformia, 25 mm longa, 8 mm lata, apice acuminata, dorso dense setis pallidis instructa, pilis scabridis deficientes.

Invalid publication: Weigend, 2000a: 25.

Illustration: Weigend, 2000a: Fig. 6 A-E.

62. *Nasa peltata* (Urb. & Gilg) Weigend, comb. nov.

– Basionym: *Loasa peltata* Urb. & Gilg, Nova Acta Acad. Caes. Leop.-Carol. Germ. Nat. Cur. 76: 205. 1900. – Type: [Ecuador, Tunguragua:] Mount Mulmul, **Spruce s.n.** (K! holotype, photo FI, neg. nr. 497).

= *Loasa alpina* Urb. & Gilg Nova Acta Acad. Caes. Leop.-Carol. Germ. Nat. Cur. 76: 197. 1900. – Type: Ecuador, Chimborazo: eastern side of Mount Chimborazo, 4000 m, **Wagners s.n.** (M! holotype, photo FI, neg. nr. 20745).

Invalid publication: Weigend 1999a: 955.

Illustration: Weigend, 2000b: Fig. 8 A-D.

63. *Nasa peltiphylla* (Weigend) Weigend, comb. nov.

– Basionym: *Loasa peltiphylla* Weigend, Sendtnera 3: 241. 1996c. – Type: Colombia, Nariño: Pasto, SE flank of Morasurco range, Granadillo, 3100 m, **Ramírez 6945** (Holotype: MI; Isotypes: COL!, K!, NY!, US!, PSO!).

Invalid publication: Weigend 1999a: 955.

Illustration: Weigend, 2000b: Fig. 7.

64. *Nasa perijensis* (Weigend) Weigend, comb. nov.

– Basionym: *Loasa perijensis* Weigend, Sendtnera 3: 235. 1996b. – Type: VENEZUELA. ZULIA: Distr. Maracaibo, Sierra de Perijá, Serranía de Valledupar, Campamento «Monte Viruela», 3000-3150 m, **Tillett 747-1159** (Holotype: MI; Isotype: MYF!, VEN).

Invalid publication: Weigend 2001a: 55

Illustration: Weigend, 2001a: Fig. 20.

65. *Nasa picta* (W.J. Hook.) Weigend, comb. nov.

– Basionym: *Loasa picta* W.J. Hooker, Curtis' Bot. Magazine: tab. 4429. – Type: Lectotipo (designado en Weigend 1998: 165.): tab. 4429, l.c. – Epitypes: **Matthews s.n.** (OXF!, G!, CBGE!, BM!).

Nasa picta (W.J. Hook.) Weigend subsp. *picta*

Invalid publication: Weigend, 1998: 165.

Illustration: Weigend & Rodríguez, 2000: Fig. 1 A-F.

66. *Nasa picta* (W.J. Hook.) Weigend subsp. *pamparamasii* Weigend & E. Rodr., subsp. nov.

– Type: Peru, Depto. Ancash, Prov. Huaylas, Distr. Pamparamas: Carretera Karka – Pamparamas, 09° 03'03" S, 77° 58, 05.05.200, **Weigend & Salas 2000/619** (Holotype: USM; Isotype: HUT, M, F, NY).

A subspecies typica similis sed sparse setosis et bracteis lineari-lanceolatis vel trifoliatis differt.

Invalid publication: Weigend & E. Rodríguez 2000: 22.

Illustration: Weigend, M. & E. Rodríguez R. 2000: Figs. 1 G-P, 2 A-C.

67. *Nasa pilovena* Weigend, Taxon 55(2): 465. 2006.

– Type: Colombia, Valle del Cauca: Cordillera Central, western slope, headwaters of Río Tuluá, Quebrada de las Vegas, páramo, alt. 3400-3500 m, **Cuatrecasas 20354** (Holotype: US!; Isotype: FI, US!).

Invalid publication: Weigend 1997: 219.

Illustration: Weigend, 2001a: Fig. 21.

68. *Nasa poissoniana* (Urb. & Gilg) Weigend, comb. nov.

– Basionym: *Loasa poissoniana* Urb. & Gilg, Nova Acta Acad. Caes. Leop.-Carol. Germ. Nat. Cur. 76: 226. 1900. – Type: Peru, [Depto Cuzco?] without locality, **Gay 1975** (Pl., Photo F, neg. nr. 38482).

= *Loasa, cuzcoensis*, Killip, Journ. Wash. Acad. Science 18: 91, 1928. – Type (lectotype, designated in Weigend, 1998: 165.): Peru, Depto. Cuzco. Prov. Cuzco: Cuzco, **Herrera 1465** (US!, isolectotypes: NY!, FI, fragment G!, photo F, neg. nr. 63399).

Invalid publication: Weigend, 1998: 165.

69. *Nasa pongalamesa* Weigend, spec. nov.

– Type: Peru, Dept. Cajamarca: Prov. San Miguel de Pallaques, Road Agua Blanca to Oytun, pass height "Ponga la Mesa," 3500-3600 m, 14 Oct. 2000 (cultivated in Berlin since Sep. 2002), M. Weigend, H. Förther, N. Dostert & E. Rodríguez R. 2000/752C (Holotype: USM; Isotypes: BM, BSB, HUT, M, MO, NY, W).

Haec species N. carneae affinis, sed ab ea habitu fruticis rigide erectis (nec herbae arcte ramosae), squamis nectariferis roseis (nec luteolis) et corolla campanulata (nec stellata) differt.

Invalid publication: Weigend, 2004c: 140.

Illustration: Weigend, 2004c: Fig. 4 A-H.

70. *Nasa profundilobata* (Werderm.) Weigend, comb. nov.

– Basionym: *Loasa profundilobata* Werderm., Notizbl. Bot. Gart. Berlin 12: 370. 1934. – Type: Ecuador, Cañar: Tipchocha near Cañar, 2300 m, **Diels 608** (B destr., holotype). – Neotype (designated in Weigend 1996d: 256): Ecuador, Cañar: Road to Quinoas from Laguna Surocucho [= Laguna Llaviuco], near buildings on lagoon, 3150 m, **Ortiz & Jaramillo 130** (AAU! neotype; NY!, isoneotype.).

Invalid publication: Weigend 1999a: 955.

Illustration: Weigend, 2000b: Fig. 13 A-H.

71. *Nasa profundiserrata* Weigend, Taxon 55(2): 465. 2006.

– Type: Colombia, Quindío: Pijáo, mountains south-east of Pijáo, on road margin in heavily disturbed forest, alt. 2800 m, **Weigend, Vélez & Chacón 3626** (Holotype: M!; Isotype: COL!).

Invalid publication: Weigend 1997: 219.

Illustration: Weigend, 2001a: Fig. 22.

72. *Nasa pteridophylla* Weigend & Dostert subsp. *geniculata* Weigend & Dostert, subsp. nov.

– Type: Peru, Cajamarca: Prov. Santa Cruz, ca. 3 km ENE Monteseco, 1750 m, 18.5.1987, **Santisteban & Guevara 079** (Holotype: FI; Isotype: HUT!).

Planta erecta, ramis erectis, rarissime basi decumbens, ad 180 cm alta, caulibus ad nodos geniculatis, sulcatis. Folia bipinnatisecta ad bipinnata, margine lobulata, petiolo basi caulem annulo setoso amplexante. Petala flava, expansa, apice leviter acuminata, integra. Squamae nectariferae dorso bicornutae, tricolores. Capsula clavata, leviter obliqua, 10-15 mm longa, apice 6-7 mm lata, stipite 20-30 mm longo suffulta.

Invalid publication: Dostert & Weigend 1999: 459.

Illustration: Dostert & Weigend 1999: Fig. 7 A-D.

73. *Nasa pteridophylla* Weigend & Dostert, spec. nov.

– Type: Peru, La Libertad: Prov. Huamachuco, 13 km on road from Huamachuco to Chugay, 5 km before Chugay, 2550–2600 m, April 1997, **Weigend, Dostert & Drießle 97/307C** (Holotype: M!; Isotypes: FI, HAO!, KI, MI, MO!, NY!, USMI, WI).

Planta adscendens (basi decumbens), ad 150 cm longa, caulibus sulcatis, ad nodos geniculatis. Folia bipinnatisecta ad bipinnata, margine lobulata. Petala alba, profunde cymbiformia, expansa, apice integra. Squamae nectariferae dorso bicornutae et callis tribus ornata, tricolores. Capsula turbinata vel clavata, leviter obliqua, 15 mm longa, apice 7–8 mm lata, stipite 20 mm longo suffulta.

Nasa pteridophylla Weigend & Dostert subsp.
pteridophylla

Invalid publication: Dostert & Weigend 1999: 457.

Illustration: Dostert & Weigend 1999: Fig. 7 E-G.

74. *Nasa puma-chini* Weigend, **comb. nov.** – Basionym: *Loasa puma-chini* Weigend, Bot. Jahrb. Syst. 118(2): 270. 1996d. – Type: Ecuador, Napo: Cantón Archidonia, San Pedro de Rucullacta, 1000 m, **Cerón & Salazar 11968** (Holotype: QCNE).

Invalid publication: Weigend 1999a: 955.

Illustration: Weigend, 2000b: Fig. 18.

75. *Nasa puracensis* (Blake ex Killip) Weigend,
comb. nov.

– Basionym: *Loasa puracensis* Blake ex Killip, Journ. Wash. Acad. Sci. 18/4: 90. 1929. – Type: Colombia, Cauca: Mount Puracé, P.N. Puracé, alt. 3100-3300 m, **Pennell & Killip 6682** (Holotype: US!; Isotype: NY!).

Invalid publication: Weigend 2001a: 64.

Illustration: Weigend, 2000b: Fig. 24.

76. *Nasa raimondii* (Standley & Barkley) Weigend,
comb. nov.

– Basionym: *Loasa raimondii* Standley & Barkley, Bull. Torrey Bot. Club 74: 82. 1947. – Type: Peru, Depto. Cuzco, Prov. Urubamba, Hacienda Tuncapata Stihit, **C. Vargas 262** (Holotype: F!; Isotype: UC!).

Invalid publication: Weigend, 1998: 166.

Illustration: Weigend & Rodríguez, 2003: Fig. 19 A-H.

77. *Nasa ramirezii* Weigend, comb. nov.

– Basionym: *Loasa ramirezii* Weigend, Sendtnera 3: 231. 1996d. – Type: Colombia, Nariño: Mpio Tangua, 5 km south of Tangua in a coffee plantation, 2600 m, **Weigend & Ramírez 3280** (Holotype: M!; Isotypes: COL!, PSO!).

Invalid publication: Weigend 1999a: 955.

Illustration: Weigend, 2000b: Fig. 25.

78. *Nasa ranunculifolia* (Kunth) Weigend, comb. nov.

– Basionym: *Loasa ranunculifolia* Kunth in Humboldt, Bonpland & Kunth, Plantae aequinoctiales: 14. 1823. – Type: Peru, Depto Cajamarca, Prov. Cajamarca, 3000 m, **Humboldt & Bonpland s.n.** (holotype P!, photo F, neg. nr. 400).

Invalid publication: Weigend, 1998: 163.

79. *Nasa rubrastra* (Weigend), Weigend, Taxon 55(2):
465. 2006.

– Basionym: *Loasa rubrastra*, Weigend, Bot. Jahrb. Syst. 118(2); 272, 1996d. – Type: Ecuador, Napo: Baeza, SW of village in river margin, alt. 2000-2200 m, **H. Balslev & J. E. Madsen**

10304 (Holotype: QCA!; Isotypes: AAU!, COL!, FI!, MBM!, NY!).

Invalid publication: Weigend 1997: 214.

Illustration: Weigend, 2000b: Fig. 20 A-F.

80. *Nasa rufipila* Weigend, Taxon 55(2): 467. 2006.

– Type: Ecuador, Napo: Cosanga, trail east of town, **Boeke & Macelroy 435** (Holotype: NY!; Isotype: QCA!).

Invalid publication: Weigend 1997: 219

Illustration: Weigend, 2000b: Fig. 14 A-H.

81. *Nasa rugosa* (Killip) Weigend, comb. nov.

– Basionym: *Loasa rugosa*, Killip, Journ. Wash. Acad. Sci. 18: 91. 1928. – Type: Peru, Depto Huánuco, Prov. Panao (?), Tambo de Vaca, **Machride 4350** (Holotype: F!; Isotype: US!).

Invalid publication: Weigend, 1998: 166.

82. *Nasa sagasteguii* Weigend, spec. nov.

– Type: Peru, Depto. Piura, Prov. Huancabamba, Cuello del Indio between Canchaque and Huancabamba, 3000 m, **Sagastegui & Cabanillas 8571** (Holotype: M!; Isotypes: HUT!, MO!).

Planta erectae, 70–100 cm altae. Caulis basi 2.5–4 mm diámetro, setis rufis et pilis scadrinus brevissimis obtectus. Folia opposita, lamina late ovata, basi cordata, apice acuminata, margine lobata, lobis 2–3 in uno latere, ovatis margine serrati-denticulatis, petiolus basi in utrisque lateribus caulis macula obscure viride ornatus. Calix tubo turbinato, lobis anguste ovatis, longe acuminatis, 12–14 mm longis et 4–5 mm latis; corolla campanulata; petala rubra, late ovata, plana, 15–17 mm longa, 4–5 mm lata, apice acuminata, dorso esetosa.

Invalid publication: Weigend, 2000a: 26.

Illustration: Weigend, 2000a: Fig. 7 A-F.

83. *Nasa santa-martae* (Weigend) Weigend, comb. nov.

– Basionym: *Loasa santa-martae* Weigend, Sendtnera 3, 236, 1996b. – Type: Colombia, Magdalena: Sierra Nevada de Santa Marta, Mpio San Pedro, Headwaters of Río Sevilla near the Finca Cebolleta, alt. 3000 m, **Burbidge 311** (Holotype: E!, Photo M, iso COL!).

Invalid publication: Weigend 2001a: 71

Illustration: Weigend, 2001a: Fig. 27.

84. *Nasa schlimiana* (Planchon & Triana) Weigend,
comb. nov.

– Basionym: *Loasa schlimiana* Planchon & Triana, in Van Houtte Flor. Serr. 10: 89. 1854. – Type (lectotype, designated in Weigend 2001a: 74): icon in l.c.: 89. t. 1001. (the original collection by **Schlim** not located, possibly at MPU).

Invalid publication: Weigend 2001a: 74.

Illustration: Weigend, 2001a: Fig. 28.

85. *Nasa solaris* (J.F. Macbr.) Weigend, comb. nov.

– Basionym: *Loasa solaria*, J. F. Macbr., Pub. Field Mus. Nat. Hist. 13: 163. 1941. – Type: Peru, Depto. Lima, Prov. Lima: Viso, **Macbride & Featherstone 577** (Holotype: F!; Isotype: US!).

Invalid publication: Weigend, 1998: 166.

86. *Nasa solata* (J.F. Macbr.) Weigend, comb. nov.

– Basionym: *Loasa solata* J.F. Macbr., Pub. Field. Mus. Nat. Hist. 13: 164. 1941. – Type: Peru, Depto. Piura, Prov. Ayavaca, above Frías, 2300-2400 m, **Weberbauer 6408** (Holotype: F; Isotype: US).

Invalid publication: Weigend, 1998: 166.

Illustration: Weigend, 2000a: Fig. 8 A-E.

87. *Nasa speciosa* (Donn.Sm.) Weigend, comb. nov.

– Basionym: *Loasa speciosa* Donn.Sm., Coult. Bot. Gaz. 23: 8. 1897. – Type: Costa Rica, **Pittier 875** (BR!).

Invalid publication: Weigend, 2001b: 153.

88. *Nasa stolonifera* Weigend, spec. nov.

– Type: Peru, Dept. La Libertad: Prov. Bolívar, road from Balsas (on the Marañón river) to the city of Bolívar, km 100 from Balsas, a few kilometers before Bolívar, remnant of *Alnus acuminata* forest in ravine with permanent water course, in deep, humus rich soil, 078079530S, 0778449300W, 17 Oct. 2000, **M. Weigend, H. Förther, N. Dostert & E. Rodríguez R. 2000/822** (Holotype: USM; Isotypes, BSB, HUT, M).

Haec species N. driessleae affinis similisque, sed ab ea foliis sine striis albis, caule bene evoluto et corolla aurantiaca (nec pallide flava) differt.

Invalid publication: Weigend, 2004c: 142.

Illustration: Weigend, 2004c: Fig. 5 A-F.

89. *Nasa stuebeliana* (Urb. & Gilg) Weigend, comb. nov.

– Basionym: *Loasa stuebeliana*, Urb. & Gilg, Nova Acta Acad. Caes. Leop.-Carol. Germ. Nat. Cur. 76: 228. 1900. – Type (lectotype designated in Weigend 1998: 166): [Peru, Depto. Amazonas,] Chachapoyas, **Matthews s.n.** (BM!; iso: OXF!, CBGE!, B† - photo F, neg. nr. 10219).

Invalid publication: Weigend, 1998: 166.

Illustration: Weigend & Rodríguez, 2003: Fig. 12 A-F.

90. *Nasa tabularis* Weigend, spec. nov.

– Type: Ecuador, Chimborazo: Chocar, 2750 m, **Penland & Summers 987** (Holotype: F!; photo M; Isotype: US!).

Planta herbacea, robusta, 100-200 cm alta. Lamina foliarum circularis, peltata, petiolo ca. 1/3 diametro a margine adaxiali remote iniserto, margine subpalmatim minus quam 1/8 diametri folii lobata, lobis 3-4 latissime ovatis vel triangularis, margine denticulatis ad serratis. Calycis tubus hemisphaericus, 12 mm latus, 6 mm longus, densissime setosis, lobis erectis, e basi ovata longe acuminatis, 25-28 mm longis et 7 mm latis, corolla late campanulata ad crateriformis; petala in gemma imbricata, late ovata ad subcircularia, inconspicue cymbiformia, apice

rotundata, carnosa, aurantiaca, dorso pilis brevibus scabridis et margine pilis uniseriatis glanduligeris obtecta.

Invalid publication: Weigend 2000: 32.

Illustration: Weigend, 2000b: Fig. 9 A-H.

91. *Nasa tingomariensis* (J.F. Macbr.) Weigend, comb. nov.

– Basionym: *Loasa tingomariensis* J.F. Macbr. Field Mus. Nat. Hist. 13: 164. 1941. – Type: Peru, Depto. Huanuco, Prov. Tingo María, sandbank 10 km south of Tingo María, 700 m, **Stork & Horton 9512** (Holotype: F; Isotype: K).

Invalid publication: Weigend, 1998: 166.

92. *Nasa trianae* (Urb. & Gilg) Weigend, comb. nov.

– Basionym: *Loasa trianae* Urban & Gilg, Nova Acta Acad. Caes. Leop.-Carol. German. Nat. Cur. 76: 212. 1900. – Type: Colombia, Quindío: Mariquita, Toche, 2260 m, **Triana 1866** (BR!); Mariquita, Toche, alt. 1400 m, **Triana 2978** (BM!; Pl, photo F!, neg. nr. 399), same locality, alt. 2200 m, **Triana 1852d** (BM!; G!); same locality, alt. 1400 m, **Triana 366** (Pl; K!); same locality, alt. 1500 m, **Triana s.n.** (BR; F; NY, US, photograph F); same locality, **Triana s.n.** (B+, photo F, neg. nr. 10220). – Lectotype [designated in Weigend 2001a: 77]: **Triana 366** (Pl; iso, Pl, K!).

Invalid publication: Weigend, 2001a: 77.

Illustration: Weigend, 2001a: Fig. 30.

93. *Nasa triphylla* (Juss.) Weigend subsp. *colonchensis* Weigend, subsp. nov.

– Type: Ecuador, Guayas: Cordillera de Colonche above Dos Mangas, 600 m, 18.9.1976, **G. Müller 3157** (Holotype: LZ!, photograph: M!, NY!).

Planta erecta ramis patulis. Folia irregulariter pinnata ad pinnatisecta, foliolis ovatis, margine lobulatis et crenatis. Petala alba, expansa, apice leviter acuminata in dentes duos breves exeuntes, 10 mm tantum longa. Squamae nectariferae dorso rotundatae nec bigibbosae. Capsula 10-15 longa, apice 7 mm lata. Stipite 15-20 mm longo suffulta.

Invalid publication: Dostert & Weigend, 1999: 454.

Illustration: Dostert & Weigend, 1999: Fig. 5 F-I.

94. *Nasa triphylla* (Juss.) Weigend subsp. *elegans* Dostert & Weigend, subsp. nov.

– Type: Peru, Depto Amazonas: Prov. Bongará. Buenos Aires, along road to Rioja, between Buenos Aires and Esperanza (km 57.5), 1900 m, 7.3.—9.5.1998, **Dostert 98/47C** (Holotype: M!; Isotypes: F!, HAO!, K!, M!, MO!, NY!, USM!, W!).

Planta erecta ramis patulis, ad 170 cm alta. Folia regulariter pinnata ad bipinnata, margine regulariter serratis. Petala alba, expansa, apice leviter acuminata, in filum unicum, inflexum, ad 10 mm longum protracta. Squamae nectariferae dorso bicornutae, tricolores. Capsula turbinata, 15 mm longa, apice 8-12 mm lata, stipite 15 mm longo suffulta.

Invalid publication: Dostert & Weigend, 1999: 456.

Illustration: Dostert & Weigend, 1999: Fig. 6A-D.

95. *Nasa triphylla* (Juss.) Weigend subsp. *flavipes*
Weigend & Dostert, subsp. nov.

– Type: Peru: Piura: Prov. Huancabamba, Quebrada W of Huancabamba, 1800 m, 17.5.1998, **Weigend & Dostert 98/203** (Holotype: M!; Isotypes: CPUN!, FI, HAO!, KI, MO!, NY!, USM!, WI!).

Planta erecta, ramis erectis, ad 60 cm alta. Folia irregulariter trifoliata, margine profunde irregulariter serratis. Petala alba, basin versus flava, expansa, apice leviter acuminata, integra. Squamae nectariferae dorso bicornutae, tricolores. Capsula cylindrica, 15-20 mm longa, apice 6-7 mm lata, stipite 20-30 mm longo suffulta.

Invalid publication: Dostert & Weigend, 1999: 456.

Illustration: Dostert & Weigend, 1999: Fig. 5 A-E.

96. *Nasa triphylla* (Juss.) Weigend subsp. *loxensis*
Dostert & Weigend, subsp. nov.

– Type: Ecuador, Zamora-Chinchipe: road from Loja to Zamora, Quebrada Zurita, 2000–2100 m, September–October 1995, **Weigend & Horn 3891** (Holotype: M!; Isotypes: MO!, QCA!, QCNE!, LOJA!).

Planta herbacea, leviter ramosa, 130 cm alta. Folia pinnata ad bipinnatisecta, foliola lanceolata supra obscure viridia, nitidula, margine grosse serrata ad lobulata. Petala alba, expansa, apice integra, acuminata vel rotundata, nec emarginata. Squamae nectariferae gibbis duabus appressissimis confluentibus instructae, margine superiore, gibbis et callo roseae, parte reliqua albae vel raro flavae. Staminodia alba, e basi leviter dilatata angustata, apice squamarum proxima conspicue rosei-incrassata. Fructus capsulam semierectam conicam ad ovoideam formans.

Invalid publication: Dostert & Weigend, 1999: 454.

Illustration: Weigend, 2000b: Fig. 26 F-H.

97. *Nasa triphylla* (Juss.) Weigend subsp. *lutescens*
Weigend & Dostert, subsp. nov.

– Type: Ecuador, Loja: Mollococha, 10 km W of Vilcabamba, 1600 m, 7.2.1985, **Harling & Andersson 21774** (Holotype: GB!; Isotype: QCA!).

Planta rigide erecta, ad 130 cm alta. Folia irregulariter trifoliata vel pinnata ad pinnatisecta; foliola ovata, supra obscure viridia, margine lobulata et crenata. Petala flava, reflexa, apicem versus angustata, in fila dua breviter filiformia protracta. Squamae nectariferae supra basin elongatum cornibus acuminatis (1/3 longitudinis squamarum attingentibus) instructae. Fructus ignotus.

Invalid publication: Dostert & Weigend, 1999: 453.

Illustration: Weigend, 2000b: Fig. 26 A-E.

98. *Nasa triphylla* (Juss.) Weigend subsp. *papaverifolia* (Kunth) Weigend, comb. nov.

– Basionym: *Loasa papaverifolia* Kunth, in Humb. Bonpl. & Kunth, Nov. gen. sp. 6: 117. 1823. – Type: (designated in Weigend, 1996a: 226): [Colombia, Tolima:] Inter Quebrada de

Toche et Los Galiegos, Quindío, **Humboldt & Bonpland s. n.** (Lectotype: P-BONPL!; Isotype: B-BONPL!).

≡ *Loasa triphylla*, Juss., Ann. Mus. Natl. Hist. Nat. 5: 27, pl. 5, t. 2, 1804, var. *papaverifolia* (Kunth) Urban & Gilg, Nova Acta Acad. Caes. Leop.-Carol. German. Nat. Cur. 76: 239. 1900.

≡ *Loasa triphylla* Juss., Ann. Mus. Natl. Hist. Nat. 5: 27, pl. 5, t. 2, 1804, subsp. *papaverifolia* (Kunth) Weigend, Sendtnera 3: 226. 1996a.

≡ *Loasa chelidoniifolia* Benth., Bot. Voy. Suph.: 101. 1844. – Type: Colombia, Nariño: Manglares sobre el Río Mira, **Barclay 863** (Holotype: KI!).

≡ *Loasa triphylla* Juss., Ann. Mus. Natl. Hist. Nat. 5: , 27, pl. 5, t. 2, 1804, var. *chelidoniifolia* (Benth.) Urb. & Gilg, Nova Acta Acad. Caes. Leop.-Carol. German. Nat. Cur. 76: 239. 1900.

Invalid publication: Weigend 1999a: 955.

Illustration: Weigend, 2001a: Fig. 31.

99. *Nasa triphylla* (Juss.) Weigend subsp. *rudis*
(Benth.) Weigend, comb. nov.

– Basionym: *Loasa rudis*, Benth., Pl. Hartweg: 75. 1839. – Type: GUATEMALA: Santa María, **Hartweg 1040** (holotype: KI!).

≡ *Loasa rhoedifolia*, Schlecht., Linnaea 14: 382, 1840. – Type: [Mexico] Cuesta Grande de Chuquillo, **Schiede s.n.** (not localizad).

≡ *Loasa bipinnata*, Donn. Sm., Coult. Bot. Gaz. 23: 7. 1897. – Type: Syntypes: [Costa Rica] San José to Desamparados, **Pittier 1314** (BM!, BR!); Llanos de Alanjuelita, 1000 m, **Tonduz 1477** (BM!). Lectotype [designated in Weigend 1996a: 227]: [Costa Rica] San José to Desamparados, **Pittier 1314** (BM!, iso: BR!).

Invalid publication: Dostert & Weigend, 1999: 453.

Illustration: Weigend, 1996a: Figs. 3A-C.

100. *Nasa triphylla* (Juss.) Weigend, comb. nov.

– Basionym: *Loasa triphylla*, Juss., Ann. Mus. Natl. Hist. Nat. 5: , 27, pl. 5, t. 2, 1804. – Type: (lectotype, designated in Weigend, 1996a: 225): Drawing of «Cardamine urens in Peruvia», by Morainville (Lectotype: P-JUSS!).

≡ *Loasa vulcanica*, André, Illustr. Hortic. 25: 302. 1878. – Type: [lectotype, designated in Weigend 1996a: 225]: [Ecuador, Pichincha:] «in Cordillera occidentali Andium Equatoriensium ad pedem montis ignivomi Corazon, circa 1500–1800 m, junio 1976, **André s.n.** (KI!, iso: NY!).

Nasa triphylla* (Juss.) Weigend subsp. *triphylla

Invalid publication: Weigend, 1999a: 955.

Illustration: Weigend, 1996a: Fig. 21A-I.

101. *Nasa umbraculifera* E. Rodr. & Weigend, spec. nov.

– Type: Peru, Depto. Amazonas, Prov. Chachapoyas: Distrito Leymebamba, ruta Leymebamba-Laguna de los Cóndores, La Atalaya (Alrededores de La Fila), 06° 49,056' S, 077° 44,134'

W, 3000-3500 m, 15.08.1998, **V. Quipuscoa S., A. Sagástegui A., S. Leiva G. & M. Bejarano C. 1208** (Holotype: HUT!; Isotypes: FI, HAO!, MI!).

Suffrutex, caulis principalis lignescens, erectus, usque ad 1,80 m altus. Folia basalia opposita, superiora alterna, usque ad 15 cm diametro, margine lobulata et serrata. Inflorescentia terminalis, monochasialis vel dichasialis; corolla campanulata; petala aurantiaca, carnosae, subplanae; squamae unicolores, alis apicalibus squamae dorsum aequantes. Capsula turbinata, valvis tribus et insuper sutura longitudinali dehiscens.

Invalid publication: Rodríguez & Weigend, 1999: 51.

Illustration: Rodríguez & Weigend, 1999: Figs. 1 A-I, 2 A-D.

102. *Nasa urens* (Jacq.) Weigend, comb. nov.

– Basionym: *Loasa urens* Jacq., Obs. Bot. 2: 15, Tab. 38, 1784. – Type (lectotype, designated in Weigend, 1998: 167.): Tab. 38 in Jacq., Obs. Bot. 2. 1784. – epitypes: Cult. at Vienna, **Jacquin s.n.** (W!, isoeotype: BM!).

= *Loasa hispida* L.f., Syst. veg. 12: 364.1786. – Type (lectotype, designated in Weigend, 1998: 167.): Tab. 38 in Jacq., Obs. Bot. 2. 1784. – epitypes: Cult. at Vienna, **Jacquin s.n.** (W!, isoeotype: BM!). = *Loasa ambrasiaefolia* Juss., Mem. Mus. Nat. Hist. Nat. 5: 26, tab. 4 f.1, 1804. – Type (lectotype, designated in Weigend, 1998: 167.): Tab. 38 in Jacq., Obs. Bot. 2. 1784. – epitypes: Cult. at Vienna, **Jacquin s.n.** (W!, isoeotype: BM!).

= *Loasa bipinnatifida* Ruiz & Pav., Anales Inst. Bot. Cavanilles 16 (Flora peruviae, et chilensis 5): 403, tab. 439. 1952. – Type (lectotype, designated in Weigend, 1998: 167.): tab. 439 in Ruiz & Pav., Bot. Cavanilles 16 (Flora peruviae, et chilensis 5). 1952. – epitype: [Peru, Depto Lima, Prov. Lima, Amancaes] **Ruiz & Pavón s.n.** (BM!).

Invalid publication: Weigend, 1998: 167.

103. *Nasa urentivelutina* Weigend, spec. nov.

– Type: Peru, Dept. Cajamarca, Prov. Celendin, Abra de Gelig on road Celendin to Balsas, 2900-3000 m, **Weigend, Franke, Skrabal & Gonzales 98/308** (Holotype: M; Isotypes: CPUN, F, USM).

Plantae stricte erectae, 80-150 cm altae. Caulis basi 5-8 mm diametro, setis albis vel flavidis sparse et pilis scabridis brevissimis densissime obtectus. Folia alterna, lamina ovata, basi leviter cordata, apice acuminata, margine lobata, lobis 5-7 in uno latere, triangularibus margine serratis. Calyx tubo turbinato, lobis ovati-acuminatis, 10 mm longis et 5 mm latis; corolla campanulata; petala aurantiaca, oblonga, leviter cymbiformia, 20-25 mm longa, 8 mm lata, apice acuminata, dente triangulari in utrisque lateribus 7 mm a basi remoto provisa, dorso sparse setis pallidis et dense pilis scabridis instructa.

Invalid publication: Weigend, 2000a: 29.

Illustration: Weigend, 2000a: Fig. 9 A-F.

104. *Nasa usquiliensis* Weigend, Henning & Schneider, spec. nov.

– Type: Peru, Dept. La Libertad, Prov. Otuzco: Road from Otuzco to Usquil, 3200 m, S 07° 51' 01'', W 078° 25' 26'',

30.05.2001, **Henning & Schneider 307** (Holotype: HUT; Isotypes: BSB x 2, HUT, USM, M).

Frutex 100-150 cm altus, folia in surculis juvenilibus tantum evoluta, demum decidua. Folia alterna; lamina tenuis, ovata, basi truncata vel subcordata, margine lobulata, lobis serratis utrumque 5-6. Petala viridescens, profunde et late cymbiformia, 20-30 mm lata, 9 mm profunda, basi unguiculata et dentes conspicuos triangulares ca 4 mm a basi remotos provisa, dorso setosa et pilis scabridis instructa. Squamae nectariferae late ovatae, apicem versus leviter angustate, 9 mm longae, 6 mm latae, basi incurvatae, callo rubro transversali instructae, apice conspicue incrassatae, leviter recurvae, sine filis, margine in alas duas erectas 2-3 mm longas protractae.

Invalid publication: Weigend et al., 2003: 780.

Illustration: Weigend et al., 2003: Fig. 10 A-H.

105. *Nasa vargasii* (J.F. Macbr.) Weigend, comb. nov.

– Basionym: *Loasa vargasii* J. F. Macbr., Field Mus. Nat. Hist. 13: 166. 1941. – Type: Peru, Depto Apurimac. Prov. Abancay: Río Pachaca, 2000 m, **Stork, Horton & Vargas 10531** (UC!, fragment & Photo FI, neg. nr. 10531).

Invalid publication: Weigend, 1998: 167.

106. *Nasa venezuelensis* (Steyerm.) Weigend, comb. nov. = *Loasa venezuelensis* (Steyerm.) Weigend, Sendtnera 3: 234. 1996b.

– Basionym: *Caiophora venezuelensis* Steyerm., Fieldiana 28(2): 414. 1952. – Type: Venezuela, Edo. Mérida, Mérida, La Isla at Tabay, 2280—2745 m, 18.5.1944, **J.A. Steyermark 56594** (Holotype: FI!).

= *Caiophora larensis* Steyerm., Fieldiana 28(2): 412. 1952. – Type: Venezuela, Edo. Lara, Between Buenos Aires & El Callado valley, above Humocaro Alto, 2285-2740 m, 12.1.1944, **J.A. Steyermark 55528** (holotype, FI!).

Invalid publication: Weigend, 2001b: 154.

Illustration: Weigend, 1996c: Fig. 12 E-H.

107. *Nasa victorii* Weigend, spec. nov.

– Type: Peru, Depto. San Martín: Prov. Huallaga, District Saposoa, between El Tambo and Jalca del Rayo, low cloud forest, 2500-3200 m, 15 Sep. 2000, **V. Quipuscoa S., S. Leiva G. & Y. Díaz 2480** (Holotype: HUT; Isotypes: BSB, F, HAO, HUSA, MO).

Haec species N. anderssonii affinis, sed ab ea ovario basi trichomatibus urentibus instructo (nec omnino trichomatibus urentibus carente) et habitu fruticis scandentis (nec herbae rigide erectae), ab omnibus speciebus ceteris Loasacearum caule costis longitudinalibus elevatis instructo differt.

Invalid publication: Weigend, 2004c: 142.

Illustration: Weigend, 2004c: Fig. 6 A-F.

Literature cited

Dostert, N. & Weigend, M. 1999. A synopsis of the *Nasa triphylla* complex (Loasaceae), including some new species and subspecies. Harvard Pap. Bot. 4: 439—467.

- Greuter, W., Barrie, F. R., Burdet, H. M., Chaloner, W. G., Demoulin, V., Hawksworth, D. L., Jørgensen, P. M., Nicolson, D. H., Silva, P. C., Trehane, P. & McNeill, J. 1994. *International Code of Botanical Nomenclature* (Tokyo Code). Regnum Veg. 131.
- Greuter, W., McNeill, J., Barrie, F. R., Burdet, H. M., Demoulin, V., Filgueiras, T. S., Nicolson, D. H., Silva, P. C., Skog, J., Trehane, P., Turland, N. J. & Hawksworth, D. L. (eds.). 2000. *International Code of Botanical Nomenclature* (Saint Louis Code) Adopted by the Sixteenth International Botanical Congress, St. Louis, Missouri, July–August 1999. Koeltz Scientific Books, Königstein. [Regnum Veg. 138]
- Rodríguez-R., E. & Weigend, M. 1999. *Nasa umbraculifera* (Loasaceae: Loasoideae), una nueva especie con hojas peltadas para el Perú. *Arnaldoa* 6: 49–56.
- Rodríguez-R., E. & Weigend, M. 2004. *Nasa longivalvis* (Loasaceae: Loasoideae), una nueva especie del Departamento de La Libertad, Perú. *Arnaldoa* 11(2): 67–78.
- Weigend, M. 1996a: Notes on Loasa I: *Loasa triphylla* Juss. and its allies in the series *Saccatae* Urb. & Gilg. *Sendtnera* 3: 219–232.
- Weigend, M. 1996b: Notes on Loasa II: „*Cajophora*» *venezuelensis* Steyerl. and its allies. *Sendtnera* 3: 232–236.
- Weigend, M. 1996c: Notes on Loasa III: Proper use of the name *Loasa grandiflora* Desr. and a new species from Colombia. - *Sendtnera* 3: 236–253.
- Weigend, M. 1996d: A revision of the Loasaceae of Ecuador. *Bot. Jahrb. Syst.* 118: 229–294.
- Weigend, M. 1997. *Nasa* & the conquest of South America. Doktorarbeit. Eigenverlag: München.
- Weigend, M. 1998. *Nasa* y *Presliophytum*: Los nombres y sus tipos en los nuevos géneros segregados de *Loasa* Juss. *Sensu* Urb. & Gilg en el Perú. *Arnaldoa* 5: 159–170.
- Weigend, M. 1999a. Loasaceae. In Joergensen, P.M. & Yáñez-León, S. (eds.). Checklist of the Vascular Plants of Ecuador. Monographs of Systematic Botany of the Missouri Botanical Garden 75: 537–539, 954–955.
- Weigend, M. 1999b. *Aosa sigmoidea*, a new species of *Aosa* (Loasaceae) from Brazil. *Nordic J. Bot.* 19: 213–216.
- Weigend, M. 2000a. A revision of the Peruvian species of *Nasa* ser. *Alatae*. *Nordic J. Bot.* 20: 15–32.
- Weigend, M. 2000b. No. 132. Loasaceae. In: Andersson L. & Harling, G. *Flora of Ecuador* 64: 1–92.
- Weigend, M. 2000c. Sinopsis de los géneros de Loasáceas y Gronoviáceas en el Perú con descripciones de los géneros en subfamilia Loasoideas. In: Sánchez V., I.: *Memorias del VII Congreso de Botánica del Perú*, *Arnaldoa* 6: 197–210.
- Weigend, M. 2001a. Loasaceae. In Bernal, R. & Forero, E. (eds.). *Flora de Colombia* 22: 1–100. Sta Fé de Bogotá: Instituto de Ciencias Naturales.
- Weigend, M. 2001b. Four newly required names in the genus *Nasa*. *NOVON* 11(1): 153–154.
- Weigend, M. 2002. *Nasa panamensis*, a new species of *Nasa* (Loasaceae) from Central America. *Bot. Jahrb. Syst.* 124: 211–216.
- Weigend, M. 2004a. Loasaceae. In: Smith, N., Mori, S.A., Henderson, A., Stevenson, D.W., & Heald, S.V. *Flowering Plants of the Neotropics*. Princeton University Press, Princeton, NJ.: 217–219.
- Weigend, M. 2004b. Loasaceae. In: Kubitzki K. & Bayer, C. (eds.). *The Families and Genera of the Vascular Plants* 6: 239–254.
- Weigend, M. 2004c. Four New Species of *Nasa* ser. *Alatae* (Loasaceae) in the Amotape-Huancabamba Zone of Peru. *NOVON* 14: 134–146.
- Weigend, M. 2006. Validating subfamily, genus and species names in *Loasaceae* (Cornales). *Taxon* 55(2): 463–468.
- Weigend, M. & Rodríguez-R., E. 2000. *Nasa picta* Hook.f. subsp. *pamparomasii* (Loasaceae), a new subspecies of *Nasa picta* from Ancash, Peru. *Arnaldoa* 7(1–2): 19–26.
- Weigend, M., & Rodríguez-R., E. 2002. Las especies arbustivas de *Nasa* Ser. *Grandiflorae* en el Norte de Perú, con la descripción de una especie nueva de la Abra de Barro Negro (Callacalla). *Arnaldoa* 9(1): 7–20.
- Weigend, M. & Rodríguez-R., E. 2003. A revision of the the *Nasa stuebeliana* group [*Nasa* ser. *Saccatae* (Urb. & Gilg) Weigend, Loasaceae] with notes on morphology, ecology, and distribution. *Bot. Jahrb. Syst.* 124: 345–382.
- Weigend, M., Henning, T. & Schneider, C. 2003. Notes on the Systematics, Morphology, Distribution and Pollination of *Nasa* Ser. *Carunculatae* (Loasaceae subfam. Loasoideae). *Syst. Bot.* 29: 765–781.
- Weigend, M., Rodríguez-R., E. & N. Dostert 1998. *Nasa insignis* y *Nasa glandulosissima*, dos especies nuevas de *Nasa* con hojas peltadas. *Arnaldoa* 5: 151–157.